

504 150 miles upstream from Chungking. Two lesser tributaries empty into the Yangtze near Lu-chou and make the city a market for native products of southern Szechwan and northern Kweichow and Yunnan provinces. Further up-river from Lu-chou is I-pin, terminal of steamer shipping on the Yangtze. The proposed Szechwan-Yunnan Railway will pass through I-pin.

361 The Szechwan provincial capital is Chengtu, located on the westernmost of four major tributaries to the Yangtze River in the province. As an old cultural center of West China, this city is well known for its handicraft industries and is reputed to have an atmosphere like that of 499 Peking. The completion of the Chengtu-Chungking Railway -- an event overpublicized in the Communist press in 1952 -- brings Chengtu into closer contact with a number of important cities in central-south Szechwan, such as Nei-chiang, the only large center for the sugar industry in West China, and Lung-ch'ang. The proposed Szechwan-Yunnan Railway is to start from Nei-chiang, passing southwest through Tzu-kung Municipality. Salt extraction in the Tzu-kung area dates back to the tenth century. In 1953 there were 330 natural gas wells supplying 4,382 brine boilers in Tzu-kung. A railway linking Chengtu with Kansu Province in the north is under construction. This railway will pass Kuang-yüan, a strategic point on the northern 491 approach to Szechwan. The existing highway

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of the Na-khi Kingdom, as well as accounts of K'un-ming and the various prefectural towns encountered *en route*, and of their history in particular. Thus the reader will gain a historic bird's-eye view of Yün-nan proper, or, at least, of a large part of the province. Before giving these detailed descriptions of the capital and the various towns encountered on the way to Li-chiang, I shall begin with a brief résumé of the history of the province as a whole.

The territory of the P'u 濮 tribe. — During the reign of the Emperor Yü 禹, 175 known as Ta Yü 大禹 (The Great Yü), who was the first emperor of the Hsia dynasty 夏紀 (2205-2198 B.C.), the land known now as Yün-nan lay outside 101 his domain, which comprised nine *chou* 州 (divisions), the south-westernmost of which was Liang Chou 梁州. Yün-nan lay to the south-west of Liang Chou and was then known as the territory of the Hsi-nan-i 西南夷 (South-western barbarians).¹

Prior to the Ch'in 秦 dynasty (255-209 B.C.) the Hsi-nan-i were all called P'u, and the name of Tien 滇 was not then known. P'u was also the name of a stream; in the *Han Shu Ti-li-chih* 漢書地理志 (Geographical Records of the Han dynasty) it is written 濮, which is the present-day Lan-ts'ang Chiang 瀾滄江 (Mekong). All the I 夷 (savages) were called P'u-jen 濮人. The Hsi-nan-man were also known as Pu-jen 卜人 and they dwelt where *lan-sha* 丹砂 (cinnabar) originated, with which they paid tribute. These Pu-jen are identical 317 with the P'u-jen. They had no rulers and lived where they pleased, scattered over the country. Hence they were called the Pai-p'u 百濮 (Hundred P'u).²

The Kingdom of Tien 滇. — General Chuang Ch'iao 莊蹻, who was a native of the State of Ch'u and a descendant of King Chuang 莊 (Chuang Wang) of Ch'u (613-591 B.C.), had been sent to conquer territory to the west of Shu 蜀 and Pa 巴 (Ssu-ch'uan) and to explore the Chiang 江 (Yangtze). He arrived on the shores of the Yün-nan Lake (Plate 1) and called it Tien. As his road back to Ch'u was blocked on account of the State of Ch'in 秦 attacking Ch'u,

¹ The Hsi-nan-i (later the Tien-jen 滇人), were also called Man 蠻; this appellation occurs very often in the Records of the Three Kingdoms (*San-kuo chih* 三國志). The character *man* is interpreted as "ungovernable vermin," and was used because they were not classed as human beings but as 虫 vermin, reptiles, insects. The Min 閩 tribe of Fukien and the Shu 蜀 tribe of Ssu-ch'uan were also considered vermin. These two tribal names are the classical names of the latter provinces. The Huns (Hsien-yün 匈奴), as well as the Hsün-yü 獯鬻, Ch'iang 羌 and Ti 狄, were classed by the Chinese with dogs and sheep, and never with human beings. Hence they used the dog 犭 and sheep 羊 radicals in the characters for their tribal names. — From the *Tien-i* 滇釋, or "Tien explained," by Yüan Chia-ku 袁嘉穀, ch. 1, fol. 24, published 1923.

² The *Yün-nan T'ung-chih*, ch. 189, fols. 22-52, states that the P'u 濮 savages had a tail several inches long, and that they lived in nests in the mountains and forests. Their land adjoined the Ai-lao 哀牢, or the present Pao-shan 保山 of Yün-nan. P'u was also the name of the land south-west of the State of Ch'u 楚. These P'u are also the P'u-man 蒲蠻 of Shun-ning 順寧, and the Lan-ts'ang Chiang (Mekong) is the ancient P'u Shui 濮水. The land of the Pai-p'u extended from Shen-chou fu 辰州府, in Hu-nan 湖南, west to Yung-ch'ang 永昌, the present Pao-shan. During the period of the San Tai 三代 (i.e., the Hsia 夏, Shang 商 and Chou 周 dynasties, 2205-256 B.C.) they were known as P'u 濮, but afterwards as the people of Tien 滇, Yeh-lang 夜郎, K'un-ming 昆明, etc. Still later they are spoken of as the Two Ts'uan (Liang Ts'uan 兩蠻) and the Liu-chao 六朝 (inhabitants of the Six kingdoms of Nan-chao 南朝). Their name was constantly changed subsequently.

487 at the foot of the nearest, the trail, now a deep trench, enters a ravine descend-
 137 ing to a stone bridge and then to what was once a hamlet called Hsiang-shui-
 133 kuan 响水關 (Rippling water pass). It is a wonderful spot in the midst of
 [579] densely forested mountains and lovely clear streams. This was the head-
 quarters of the robber bands. Thanks to the energetic rule of the then gov-
 ernor, Lung Yün 龍雲, many of the bandits were killed, the remainder dis-
 persed, and a fort erected where soldiers are always on guard.

The trail winds in and out between high, forested spurs, finally ascending to a pass of 6,500 feet elevation. It descends into a small valley, across low ridges and thence to the small, forlorn hamlet of She-tzu at 6,100 feet. After having been plundered several times by the bandits who once occupied it for many months in 1927-28, a mud wall has been built around it, and watch-towers on the tops of the surrounding spurs. She-tzu, which formerly belonged to Kuang-t'ung hsien, is now a sub-divisional magistracy, in the district of Hei-ching 黑井 (Black salt-well — in contradistinction to the Pai-ching 白井, White salt-well). In Hei-ching are two wells called A-lou ching 阿陋井 and Yüan-yung ching 元永井. Large caravans loaded with salt make their way from here to the capital.

[317] *Fifth stage.* — From She-tzu to Kuang-t'ung hsien 廣通縣 is a distance of 60 li. The trail now passes across the She-tzu plain and enters a small ravine leading to a pass, at 6,550 feet and 15 li from She-tzu, where is a shrine — a large old temple dedicated to the famous hero Kuan Yü 關羽 of the San Kuo 三國 (Three Kingdoms), later canonized as Kuan Ti 關帝 and made a god in 1594 by Ming Wan-li. The pass is called Le-ma Kuan 勒馬關 (Rein-in the horse Pass). From this pass, once a dangerous spot held by bandits, the trail descends to the edge of a small, cultivated plain on which stands the village of Hei-chü 黑直, elevation 6,125 feet, consisting of about 25 houses; wheat, barley, and broad beans are cultivated. A number of peasants were [483] encountered here, carrying large pine logs by means of straps over their fore-heads and wooden yokes around the backs of their necks, the yoke resting on the shoulders (PLATES 7, 8).

The trail ascends steeply — the hill-side being covered with magnolias, Michelias, *Castanopsis Delavayi*, *Keteleeria Davidiana*, pines, Pyrus or wild pears, oaks, etc. — to a pass at 6,500 feet and descends to the village of Meng-ch'i-p'u 蒙七舖, elevation 6,425 feet. This is the regular lunch-stop. The path leads on across a spur into a depression which it encircles, and then climbs to a higher spur, elevation 7,110 feet. It continues on top of the spur for some time, leaving a deep valley to the right, and descends steeply over a mere rock pile of a trail to the plain of Kuang-t'ung and the dilapidated, ruined town of that name. Kuang-t'ung must once have seen better days, judging by its large now ruined temples. Its elevation is 6,300 feet.¹³

¹³ The aboriginal name of Kuang-t'ung was Lu t'an 路談. [The character 談 stands for the Tai word *kieng* or *shiang*, as in Kieng-mai, a town in northern Siam. The word is often written 談 *shan*, and 談 *chien*, the latter probably in imitation of the Tai sound. The meaning of the Tai word is a State, a province or a town.] In the beginning of the Yüan dynasty (1253) the Lu-t'an ch'ien-hu 路談千戶 (Lu State of 1,000 families) was established. In the 12th year of Chih-yüan 至元 (1352) [the *Kuang-t'ung hsien ch'ia*, ch. 1, fol. 5b, states the 11th year (1351)], it became Kuang-t'ung hsien dependent on Nan-an chou 南安州,

361 inhabitants. In the Han dynasty Ch'u-hsiung belonged to the territory of I Chou. Afterwards it became the dwelling-place of miscellaneous Man (savages) carrying on agriculture and pasturage. They were called the O-lu 峨祿. In course of time, Wei-ch'u 威楚, headman of the Ts'uan, built a tamped earth wall, and Ch'u-hsiung became the *ts'an* (town) of the O-lu. Because of that it was called the Wei-ch'u ch'eng 威楚城. [The town is known even nowadays as Wei-ch'u. The wall was rebuilt by Kao Ming-liang 高明星 in the time of the Tuan family, during the Sung dynasty, actually in the reign of the Nan-chao King, Tuan Cheng-shui 段正淳 (1096-1108), who laid the foundation of the new Ch'u-hsiung wall two li north-west of the present town of Ch'u-hsiung]. At the end of the reign of T'ang Cheng-kuan 貞觀 (649) all the other Man (savages) became subjects of Wei-ch'u. In the 16th year of Hung-wu (1383) the viceroy petitioned the Emperor and, presenting a map, suggested that a wall be built on the present site of Ch'u-hsiung. The petition was granted and a brick wall erected seven li in circumference and 25 Chinese feet high. It collapsed frequently and was rebuilt, the last time in 1865.

487 Seventh stage. — From Ch'u-hsiung to Lü-ho-kai 呂合街 is a distance of 60 li. Elevation 6,500 feet.

133 Passing through the west gate and the long suburb of Ch'u-hsiung, the trail skirts the western end of the plain, crosses a camel-back bridge near the hamlet of San-chia-t'ang 三家塘 (Three-family post-station), and enters a valley with several branches, taking the right-hand branch. The hills are composed of red sandstone and red clay. Passing over low hills covered with small pine trees, we descend to another small plain which the trail skirts; several hamlets are situated at the foot-hills, the elevation being 6,350 feet. The regular lunch-stop for the caravans is the hamlet of Ta-shih-p'u 大石舖 (Great rock shop). Magnificent groves of oaks (*Quercus serrata*) grow along the road.

From this hamlet the trail meanders over rolling country and thence up a ravine past the village of Ch'ing-yüan-shao 清源哨 (Clear spring fort), 15 li from Lü-ho-kai and Ch'ien-liang-ch'iao 錢糧橋 (Tollbridge). Here in the olden days used to be a *shao* 哨 (outpost), where two soldiers stood guard. [317] The odor of sulphur permeates the air, probably from hot sulphur springs in the neighborhood. Elevation 6,450 feet. Some distance beyond, a large stone bridge crosses the Tzu-tien Ho 紫甸河, which river has its source in Ting-yüan hsien 定遠縣 and flows into the Pai-lung Ho 白龍河.

[361] The trail ascends the spur dividing the valley of the Lung Ch'uan 龍川 from the Lü-ho-kai plain, and crossing its highest point at 6,625 feet descends steeply past an old temple to the long hamlet of Lü-ho-kai, consisting of two rows of dilapidated houses. At the western end of the hamlet is a temple with a tall wooden tower overlooking the one street; the temple is called Lü-tsu Ko 呂祖閣 (Ancestral court [pavilion] of the Lü family). Lü-ho-kai belongs to the magistracy of Ch'u-hsiung. The ancient name of Lü-ho was Ho-kuan-t'an 合關灘. Later it became the Lu-ho-i 呂合驛 (Lü-ho courier station), also known as Lü-ho 呂閣. During the time of the Nan-chao Kingdom a certain Lü Shun-yang 呂純陽 lived at this place, whence its name.

Eighth stage. — From Lü-ho-kai to Sha-ch'iao 沙橋 (Sand bridge) is a distance of 65 li. Elevation 6,900 feet.

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• [317] Twenty li of level going, after passing the village called Yu-so 右所, bring us to another small hamlet at the foot of the embankment of the canal³⁸ which carries the waters of the Lang-k'ung Ho 浪穹河 [here the stream is called the Mi-chü Ho 彌苴河] into the Ta-li Lake. This is the hamlet of Chung-so 中所 where we cross a bridge³⁹ over the canal to the eastern embankment. Elevation 7,000 feet. The slopes of the canal banks are wooded mainly with Albizzia trees, Rhus, Zizyphus, etc., giving welcome shade to the traveler. Here we met with large salt caravans with their dirty, grey, cylindrical blocks of salt,⁴⁰ also many tribespeople carrying loads of firewood by means of yokes around their necks. The yokes in turn are fastened to straw bands borne over the forehead (PLATES 7 and 8).

As the trail nears the Lang-k'ung gorge, the stream is bounded only on the east by the embankment, the mountains to the west forming its other bank. Here the path enters a deep ravine, bare of trees, except for some *Opuntia* cacti which grow among the black boulders and line the trail or road — for this part of the highway has been improved and graded, and can almost be called a road. The old trail, which led purposelessly up and down over the hill-side, had been abandoned since my first visit in the spring of 1922. Half-way up the gorge we come to a bridge, elevation 7,225 feet, over the roaring torrent known in ancient days as Hsi-erh Ho.⁴¹ On the other side of the gorge a trail leads to the hsien city of Lang-k'ung,⁴² formerly known as Erh-yüan 洱源; from there it is 100 li north to Chien-ch'uan, and 45 li south to Teng-ch'uan.

executed with his entire family and relations by order of the Emperor, so that there remained no descendants.

³⁸ This canal is called by the Na-khi, Bu-ndo-lo-gko (Hind part of a pig). *Lo-gko* means "inside."

³⁹ This bridge is called Te-yüan ch'iao 德源橋, and was built by Wang Kan 王綱, a native of Teng-ch'uan, during the reign of Ming Ying Tsung, period T'ien-shun 天順 (1457-1464).

⁴⁰ The salt comes from the salt-well of Ch'iao-hou ching 喬后井, situated on the east bank of the Pai-shih Chiang 白石江, which is really the Yang-pi 漾濞, the Chinese calling the upper part of that river the Pai-shih Chiang. The Chinese military map of Yün-nan, printed in the seventh year of the Republic (1918), gives three names for the river: the Kung Chiang 工江, Pai-shih Chiang 白石江, and Yang-pi 漾濞. The strangest thing about this map, however, is that the northern part of the Yang-pi, or Kung Chiang, flows into the Mekong near a place called Hsiao-tien 小甸; the central portion, or Pai-shih Chiang, flows west of the Ts'ang Shan; and the lower part, called the Yang-pi, according to the same map, flows again into the Mekong, this time north of the town marked Yün chou 雲州! This error has, however, been corrected in a later edition published in 1928. The Yang-pi has its source at the head of the valley; 30 li south of Shih-ku 石鼓, flows by Chien-ch'uan 劍川, where it receives the outlet of the lake, and then straight south, and west of the Ts'ang Shan range, into the Mekong. No large river enters the Mekong below Wei-hsi. It is impossible to say what the Kung Chiang is, and where it enters the Mekong.

⁴¹ This river has its source 20 li north of Lang-k'ung in the mountain called Pa-ku Shan 霸谷山; it is the present-day Lang-k'ung River. Chinese geographies say that it flows east of Ta-li and then joins the Yang-pi Ho. They consider Ta-li Lake, into which the river flows at Teng-ch'uan, as a continuation of the river, and the Hsia-kuan Ho, the exit of the Lake, as the same river.

⁴² During the Han dynasty Lang-k'ung belonged to the land of Yeh-yü (the present Ta-li region).

lighting a fire beneath he left them to their fate. It was always a dreaded pass⁴⁸⁷ for caravans. At this summit are large groves of oaks (*Quercus Delavayi*); the¹³³ elevation is 8,930 feet. The motor road passes below and to the west of it. ¹³⁷

The trail here descends a little, only to climb again to 9,250 feet, and then continues downward between round, low hills of yellowish-red clay, over a shallow basin-like depression which in the rainy season becomes a pond. This is called the Yeh-ya t'ang 野鴨塘 (Wild-duck pond). The trail goes down between pines to the village of the same name, which we found entirely in ruins, having been looted and fired by the brigands. The path leads steeply into a circular, unproductive, gravelly basin of which only the terraced slopes are cultivated. A big stream issues from the right, which in the summer is an unfordable torrent. It is here called the Sha-pa Ho 沙壩河, as it flows through a sandy plain lined with old poplars and willows. It is a treacherous river and has carried away several bridges; lately a new one of stone has been constructed. At the other end of the little sandy plain is the hamlet of Yeh-chi-p'ing 野雞坪 (Pheasant flat). Elevation 8,500 feet.

From this basin we climb over pine-covered hills on the top of which the trail continues. A little westward and ahead is the mountain mass of Lao-chün Shan 老君山 or Mountain of Lao-chün or Lao Tzu, the founder of Taoism. Beyond this mountain is visible La-pa Shan 拉巴山 (La-ba Ngyü in Na-khi), between 14,000 and 15,000 feet in height. To the extreme left, or south-west, is another high mountain which divides the Mekong from the Yang-pi. It is called Hsüeh-p'an Shan 雪盤山 (Snow-basin Mountain), but more commonly Yen-lu Shan 鹽路山 (Salt-road Mountain), for salt is brought³⁷ over it from the salt-well of La-chi-ming 喇雞鳴, west of Lan-p'ing 蘭坪 (Mandel-Mazzetti on his map calls it the Ye-lu-schan).

The trail descends over a gravelly ridge winding along valley slopes with a roaring stream to our left, down to the plain of Tien-wei; we cross the same stream which we passed over at Yeh-chi-p'ing and arrive at the village of Tien-wei, after going through large groves of old oaks. Half of the village, situated on the slopes of a hill across the plain, was destroyed. The distance from Niu-kai to Yeh-chi-p'ing being 53 li, the latter is the regular lunch-stop. The elevation of Tien-wei is 7,800 feet.

Seventeenth stage. — From Tien-wei to Chiu-ho 九河 is a distance of 60 li. Elevation 8,150 feet.

The trail leads from Tien-wei past a temple downhill to the Chien-ch'uan plain, leaving the Chien-ch'uan Lake (Chien Hu 劍湖), which is said to be 60 li square, to the east. We pass a new bridge, called Hai-hung ch'iao 海虹橋 (Lake rainbow bridge), over the Tien-wei Ho (the river makes here a semi-circle like a rainbow), which is none other than the Yang-pi River, by the village of Shang-teng 上登; at its entrance opposite the bridge, there is a large, now ruined, temple which is three li from Tien-wei. On the Chinese military map the town of Tien-wei is south-east of the lake, though in reality the lake is east of the town. The plain is intensively cultivated, while on the hill-sides grow *Catalpa Duclouxii*.

From the trail one has the first good view of the Li-chiang snow-range (Yü-lung Shan 玉龍山 — Jade dragon Mountain), although it is already visible

133 *Hsüeh-p'an Shan* 雪盆山 (Snow basin Mountain) is situated 200 li south-west of Li-chiang, and 10 li west from the ancient Lan chou. It has 12 separate peaks, and snow remains throughout the four seasons (there are, however, no glaciers on the mountain, which is 14,000 feet in height).

[317] The *Hsüeh-p'an Shan* is now better known as the Yen-lu Shan 鹽路山 (Salt road Mountain), as all the salt from the La-chi-ming 喇嘛鳴 wells is brought over this mountain to Chien-ch'uan, etc. On the latest Yün-nan military map, published in 1928, the *Hsüeh-p'an Shan* extends east of Lan-p'ing 蘭坪 for about 120 li, about 50 li north of Lan-p'ing and 70 li south, making a curve. In the same range is a mountain marked *Fu-yüan Shan* 福源山, extending somewhat north-east. I believe that this mountain is identical with the peaks known as Yen-lu Shan, and is the central part of the *Hsüeh-p'an Shan*.

How accurate Chinese geographical accounts are as to distances can be judged from the following statement found in the *Li-chiang fu chih lüeh*, Vol. 上, ch. 4, fol. 23b: "The *Hsüeh-p'an Shan* is 200 li south-west of the city of Li-chiang, and 10 li west of the ancient Lan chou [present Lan-p'ing]"; On p. 35a, it states that "the ancient Lan chou is 360 li south-west of the city of Li-chiang." We have here a difference of 160 li; furthermore the *Hsüeh-p'an Shan* is not west, but east of Lan-p'ing. By stating it is 10 li distant from Lan chou, one would expect a definite mountain and not a range about 120 li long. There is a high mountain mass just about 20 li east of Lan-p'ing, and that is the Yen-lu Shan (Handel-Mazzetti's Ye-lu-schan). I crossed that mountain three times and know whereof I speak.

About the *Fu-yüan Shan* the same source states that it is 250 li west of Li-chiang, yet this mountain is in the center of the *Hsüeh-p'an Shan*. Again, the *Yün-nan T'ung-chih* says that the Yen-lu Shan is south of the *Hsüeh-p'an Shan* and reaches to the border of Yün-lung. On its southern slopes rises the Ta-lang Ho 大郎河, which flows south-west into the Pi Chiang 批江. [This is the river which flows past Yün-lung and is marked as the Lo-ma Ho on Major Davies' map.]

Fu-yüan Shan 福源山 (Lucky spring Mountain) is 250 li west of Li-chiang and at the north border of Lan-p'ing. The mountain extends south-east over 50 li.

Hua-ma Shan 花馬山 (Piebald horse Mountain) is 350 li north-west of Li-chiang and near the south-east border of the ancient Chü-chin chou 巨津州, the present Chü-tien. On one of the cliffs is a rock resembling a piebald horse, whence the name. In ancient days the people of the Mo-so chao called their country the *Hua-ma Kuo* 花馬國 after that mountain. (See History of Li-chiang, p. 95.)

Han-sou Shan 漢叢山 is 500 li west of Li-chiang and close to the Shu-miao 樹苗汛 guard-house, north-west of the ancient Chü-chin chou. It is a spur or branch of the Lao-chün Shan. On its summit are three lakes, each five *mou* wide, or a little less than an English acre, and of unknown depth. [This mountain is south of present-day Lu-tien 魯甸.]

Feng-lo Ta-shan 風羅大山 is over 700 li west of Li-chiang; it forms the western valley wall of the Mekong or Lan-ts'ang Chiang 蘭槍江, and extends to

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the Dang or A-dang lung-pa (Chü-k'o-ti Chiang). Instead of following the stream a rocky trail leads to a pass on the spur, and we descend to what is left of or originally was Liu-t'ung-chiang 溜筒江 (MAJ. D., Liu-t'ou-chiang 溜頭江; Ting's New Chinese Atlas gives the name Lan-ts'ang-chiang = Mekong instead, this is an error) situated on the east bank of the Mekong at an elevation of 7,800 feet. Liu-t'ung-chiang refers to the rope-bridge which spans the Mekong here; the village, if such it can be called, consisted of one single mud-brick house in ruins, but inhabited by a poor family, apparently squatters. Opposite on the west bank of the Mekong is the Tibetan hamlet of Ma-pa-ting 麻巴定 (written Mag-pa-sdeng in Tibetan).³⁰ The rope bridge here spanning the Mekong is about 100 feet above it, the river flowing between steep rock walls and is about seventy yards wide. The only water available is the muddy water of the Mekong. Women go down with huge wooden cylinders to fetch it; to prevent the water from splashing they float a lot of dead twigs on it, in lieu of green leaves or leafy twigs as is usual. The wind howls furiously in this arid gorge, filling the air with dust. It is one of the dreariest regions, dry, forsaken, and forlorn, a veritable desert.

5. YAR-KHA-LO (YA-K'A-LO 雅卡洛)

A trail continues along the gorges of the Mekong to Yar-kha-lo (Ya-k'a-lo), a distance of five days from Liu-t'ung-chiang. The mountains which hem in the Mekong are steep and the trail is here and there obliterated by land-slides of loose shale. It often leads to a height of 10,000 feet or even more, crossing bare spurs between which lateral streams descend from the snowy heights. In these lateral valleys are situated Tibetan hamlets, where barley and wheat are cultivated, with fruit trees such as pears, peaches, and walnuts, on the margins of the fields.

On the west bank of the Mekong are about as many villages as on the east bank. North of Liu-t'ung-chiang beyond the village of Ma-pa-ting there are the following in the order named from south to north: Ssu-ts'un 司村, Jung-ma 容馬, and Me-re-shü (Mei-li-shu). South of Ssu-ts'un are the hamlets of Kua-lo 瓜洛 and Hu-li 呼里. On the east bank Chiang-p'u 江鋪, La-p'u 拉鋪, Pa-me or Pa-mei 巴美 (MAJ. D., Pamien) and Pa-yung-kuo 壩永鍋 (MAJ. D., Pa-yung-ko) and then Yar-kha-lo. Pa-yung-kuo is at an elevation of 11,500 feet.

Yar-kha-lo (Yar-kha-logs) is a town of about 100 houses, and is situated at 9,500 feet elevation (latitude 29° 2' 30"). Here are important salt wells situated on the banks of the Mekong between giant blocks of granite; they supply all the villages of this region with salt. The valley slopes are composed of weathered sandstone, while about 300 feet above the river are beds of rubble which are apparently river terraces. A Catholic mission station has been established for many years in the town. Since the Tibetan wars in 1930-1931 Ya-k'a-lo has been annexed by the Tibetans, and is now reckoned to Tibet proper instead of Ssu-ch'uan. The Yün-nan — Tibet and former Ssu-ch'uan border is only a short distance beyond Pa-yung-kuo.

P'u-êrh to Kêng-ma

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to understand. The place was originally a Shan state but ³⁶¹ has now become a *t'ing* under a regular Chinese official.

After my experience in P'u-êrh I had rather made up ³¹⁷ my mind to give up calling on officials, but the Wei-yüan *T'ing* came to see me himself soon after I arrived and was very friendly. The principal product of the place is salt. There are several mines in the valley of the Wei-yüan Chiang, and there is a good deal of trade in this commodity with the neighbouring districts. The elevation of the plain is about 3000 feet and the place is considered feverish by the Chinese.

Two more days crossing a range at 6,300 feet brought us ⁰⁰⁰ on the 14th April to Mêng-ka¹, which, like Wei-yüan, was formerly a Shan state and still has a Shan sawbwa, though the place is now incorporated in the Wei-yüan district. The plain lies somewhat higher than that of Wei-yüan and, though some 15 miles long, is much cut up by rather high-lying ground, which cannot be irrigated and is uncultivated and covered with jungle. Mêng-ka is not a place of any ⁵⁶³ importance, and there is little or no trade in it. The population of the place is Shan, but in the town itself there is a Chinese bazar village, and a few families of Panthays also live here.

I halted a day to rest the mules and left again on the ⁰⁰⁰ 16th. Our road took us gradually up a range of 7000 feet, from which there is a magnificent view of the surrounding hills and of the course of the Mekong valley, which can be traced for a long way. The next day a very steep descent brought us to the Mekong which we crossed by a large punt-shaped ferry-boat to the mixed Shan and Chinese village of Ta-pêng or Ta-pong. The river is as usual shut in by very steep hills. It is about 100 yards wide, with a strong current and full of rapids, so much so that in the rains the ferry is sometimes impassable for a few days at a time. Probably this is also the case with other ferries over the Mekong. The height of the river at Ta-pêng is 2,800 feet.

On the 18th we had a very stiff piece of climbing, reaching the top of the range at 7,400 feet. From here the

¹ Mông Ka in Shan.

288 ported from Hong-kong either through Tong-king or up
 438 the West River to Pai-sé.

We had not seen much signs of trade on the road from Yün-nan Fu here, and indeed it was hardly to be expected, as we had not been on what is considered a main road. Coming from the east we had met perhaps 200 or 300 coolies carrying earthenware cups and jars to the capital, from a place called Mao-mao-shih not far from Yüeh-chou.

438 The caravans going the other way were confined chiefly
 • 317 to mules loaded with salt. Yün-nan Fu is a great distributing centre of salt and tea. The former article comes from wells which lie north of Ch'ü-hsiung Fu.

136 I had a little shooting in this Ch'ü-ching River plain. Near Lu-liang there were Brahminy ducks (Ruddy Sheldrake) feeding in the opium fields, and I found them quite easy to get up to. Baber also mentions that these birds are easy to approach in poppy fields. He suggests that they feed on the opium and get stupefied by it. This seems probable, as he is generally a very wary sort of duck. I also shot mallard, teal, and snipe in this plain, and near Ch'ü-ching got two widgeon out of a flock of a hundred or more on a small lake. This is the only time I have seen this duck in China.

000 Watts-Jones, who had, as I mentioned before, come by the main road through Ma-lung Chou, had passed through Ch'ü-ching on the 6th, so I was now following him on to Hsüan-wei.

Leaving Ch'ü-ching on the 11th we passed Chan-yi Chou, where our route rejoined the main road and the telegraph line. From here another very important road branches off eastward through P'ing-yi Hsien to Kuei-yang Fu, the capital of Kuei-chou province. From Kuei-yang Fu one road turns northwards to Ch'ung-k'ing, and another continues eastward through Hu-nan, till it strikes the Yangtze at the Tung-t'ing Lake.

We went on a little further and slept at Chiu-lung-shan in a temple on a little island between two branches of the Ch'ü-ching River. Here my interpreter discovered an official notice posted up, referring to Captain Pottinger's party having been obstructed in two places, and warning everyone against interference with him, as he was survey-

T'êng-yüeh to P'u-êrh

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wide, but the crossing did not take long, as the large punt-shaped boat would carry 10 mules at a time. 000

This ferry is a good deal used, as nearly all the salt for the Shun-ning and Yün Chou districts comes across here from the wells of Wei-yüan and Chên-yüan. I asked the salt depôt man at the ferry how much salt crossed this ferry in a year. With the usual readiness of a Chinaman he promptly replied, "300,000 mule-loads." "But this would make 800 loads a day all the year round," I ventured to suggest. And as there is no traffic in the rains, he had to acknowledge that he might have slightly over-estimated. From what I saw myself on the road I should think 8000 or 9000 mule-loads a year would be a fair estimate. 317 •

Salt is a very important article of trade in Yün-nan, as it is a Government monopoly, and none is allowed to be brought into the province from abroad. There are three parts of Yün-nan where salt is obtained. These are (1) Yün-lung Chou, which supplies north-western and a good deal of western Yün-nan, including T'êng-yüeh, Yung-ch'ang, and Ta-li; (2) Wei-yüan, Chên-yüan, and Ching-tung districts and Mo-hei, near P'u-êrh: these wells supply southern and south-eastern Yün-nan; (3) the country north of Ch'u-hsiung Fu: from here is supplied the northern part of the centre of the province, including the capital. The north-eastern corner of Yün-nan, including Tung-ch'uan and Chao-t'ung obtains its salt from Ssü-ch'uan province. It is always officially laid down for each district where it is to get its salt from, and none is allowed to be brought from elsewhere.

After crossing the ferry we followed the river down for a little way and then climbed up to the village of T'uan-shan to sleep. We were now in the district of Ching-tung T'ing, but the bit of country round the ferry is in charge of a retired highway robber. A Mahomedan by religion, he naturally sided with his own people in the Panthay rebellion, but towards the end, being a prudent and far-seeing man, he recognised how things were going, and went over to the Chinese side. So zealous did he show himself in the slaying of his former brothers in arms, that the Chinese Government rewarded him by granting him official rank and a small piece of country to rule. Such instances 669

T'eng-yüeh to P'u-érh

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000 inhabitants of the valley are chiefly Shans. In the first march we passed two of the salt wells. One of these called
 317 Hsi-k'ung-ching I stopped to examine. The water is drawn up in a large skin bucket from the well, which they say is 180 feet deep. It is then boiled in enormous cauldrons for three or four days till a residuum of earth strongly impregnated with salt is left. This is then pounded, mixed with water and boiled afresh over and over again till nothing but pure salt remains. The well is said to produce 500 lbs. of salt in the year. They do not work it in the rains, as they say the water is not then salt enough. I suppose the amount of rain water which falls into the well and filters through the earth into it dilutes the original salt water so much that it is not worth boiling.

273 Strong liquor is apparently sold cheap at Hsi-k'ung-ching, for soon after we had got to our halting place for the night I got a message to say that my Madrassi cook was lying on the road and could not be got on. So dead drunk was he that he could not move for hours and did not turn up till the middle of the night. He appeared the next morning with a bland face as if nothing particular had happened, and afterwards explained that a bad attack of fever had prevented him from arriving in camp as soon as he could have wished.

000 Indian servants are the greatest possible nuisance in China, as of course they are quite unable to talk to anyone or to buy anything. Their only use is that they attract a good deal of attention, and take part of the crowd of sightseers away from oneself. In Burma it is impossible to get a Chinese cook. Travellers entering western China from the Yangtze direction have the great advantage of coming with Chinese servants.

On the second day out of Wei-yüan we left the Chên-yüan road and, fording the river, turned eastward. The road was abominable, leading up the actual bed of a stream covered with large stones, and crossing the stream more
 563 than 30 times in less than six miles. We slept at T'eng-t'ung, a village inhabited by the K'a-tu tribe, who are called
 197 Wo-ni by the Chinese. Their language is closely allied to the different Lo-lo dialects, and the headquarters of the tribe is in the T'a-lang district.

000 The next day, the 24th, we crossed the watershed between the Mekong and the Black River at 7,500 feet, and on Christmas Day reached Hsin-fu. The village contains only 30 houses, and is built on the Pa-pien Ho, a river 50 yards wide, which is the upper part of the Black River of Tong-king.

753 The height of Hsin-fu is only 3,400 feet, and the whole of this part of the Black River valley has a bad reputation for unhealthiness. The Hsün-chien, the small official who is in charge of the district, had just died and was in his coffin in the room of the temple I was sleeping in, awaiting removal to his native place for burial.

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132 Certainly I did not find the Black River valley a pleasant climate even at this time of year. At night the thermometer would go down to 40°, and there would be a nasty cold mist till the sun broke through about ten o'clock, when it would become decidedly hot. But in justice to this valley I should mention that Turner and Ker were travelling in it for some days in the height of the rainy season, and that none of their party, which included several Chinamen, suffered at all from fever. So healthy are the great part of the uplands of Yün-nan, that the Chinese of that province are apt to condemn as unfit to live in any place where it is possible to get fever.

000 For two days from Hsin-fu we followed down the Pa-pien valley, but keeping generally some way off the actual river. An uninteresting country, very thinly populated by Chinese and K'a-tus. Later on in March and April there is a good deal of traffic in P'u-érh tea along this road, but at this time of year there is no trade except in salt carried by men on foot from Mo-hei, near P'u-érh.

• 317 Leaving the Pa-pien valley altogether on the 28th, we turned more westward and the next day reached Mo-hei, a large village with an important salt well which supplies a very large part of southern Yün-nan.

Here our route joined the main road from Yün-nan Fu to P'u-érh Fu, and the next day, crossing a range at just over 6000 feet, we dropped down into the P'u-érh plain.

206 The only apparent change in P'u-érh since I was there five years before was the establishment of a telegraph office. In the evening I spent several hours at the office

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The Mekong valley on the Tibetan border 263

The name Liu-t'ou-chiang is Chinese, meaning "bridge-000 head river," for *liu-tzu* is the name by which they call the rope bridges.

For five more days our road lay up the valley of the Mekong, but the going was by no means flat. The hills on both sides of the river are very steep and full of landslips, the formation being loose shale. The path keeps up on the hillside, rising in places to 10,000 feet or more, and continually crossing bare brown-looking spurs.

Between these spurs are little side streams running245 down from the snow-covered tops of the range, and in these little valleys the villages are prettily situated, surrounded by green fields of wheat and barley, and by pear and peach trees which were then in blossom.

The Mekong runs for the most part between steep banks and there is practically no flat ground along it. To the west is a fine snowy range, the highest peaks of which Ryder made about 20,000 feet by observations with the long-shaped clinometer.

The Tibetan inhabitants of this valley appear well off132 and live in an excellent climate where it does not get extremely cold. Their houses are well built, often of three storeys, the ground floor solidly constructed of stone, and the two upper floors usually of wood. The roofs are flat, made of large beams covered over with mud, and the upper storeys are built so that they cover less space than the storey below them; thus part of the roof of one storey forms a terrace or verandah to the storey above it.342

On the 28th of April we reached Ya-k'a-lo, a straggling317. village of 100 houses. The place is important because of its salt wells which supply all this part of the country.

On our second march out of A-tun-tzu we had already000 met one French missionary, Père Bourdonnec who was on his way to Tzu-ku (Tse-kou according to French orthography). At Ya-k'a-lo we were to have the pleasure of finding Père Grandjean who had come from Ba-t'ang to take Père Bourdonnec's place during his absence. He took much interest in our project of getting through to Assam, though he did not give us much hope of success. We are much indebted to him for the assistance and advice he was always so ready to give us.

The Climate and Products of Yün-nan 315

sulphur and *alum*, both of which are extracted from hot springs which occur all over the province.

Salt also must not be forgotten. There are salt wells in many parts of Yün-nan, and the province supplies itself except the north-east corner which obtains its salt from Ssü-ch'uan. The working of the wells is a Government monopoly, so salt at present is not allowed to be imported from abroad¹.

Not least among the products of Yün-nan must be mentioned *marble*. From the quarries at Ta-li Fu is obtained a marble which is much used for tombstones and for ornamental work in houses. It is famous all over China, and with better means of transporting it to distant places the output would doubtless largely increase.

We now come to *coal*, the most important of all the products of the earth of Yün-nan, for on cheap fuel must largely depend the success of the mines. It is found in a great many places in the province, but varies much in quality. Some of it is very powdery and can only be used in the form of briquettes: in other places it is of good quality and can be obtained in large blocks. Even when the coal now in use is of inferior quality it does not follow that a better sort would not be found by mining deeper, for at present it is obtained principally from surface workings.

Coal is found in the neighbourhood of Ta-li Fu, and in several places between this town and Yün-nan Fu. Eastward from the capital it becomes still more abundant, and is found nearly all along the proposed railway line from here to the Yangtze. In the Hsüan-wei Chou district coal is almost the only kind of fuel that is used. Nor is it only near the line of the proposed railway that coal exists. It is mined in many places on the upper course of the Yangtze, and in several other districts of Yün-nan.

Of metals and of coal in Yün-nan it may be said that no examination of the mines has at present been made in a very detailed manner. If the railway is to be constructed it will be most essential that all mining districts anywhere within reach should be carefully examined, and a report made by experts as to the prospects of working them by machinery.

¹ For more details about the salt wells see p. 197.

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316 Basin produces annually about 4,000,000 tons of coal, 200,000 tons of iron, and 100,000 ounces of placer gold.¹

• 317 The production of brine-salt is the most important mining activity of the Basin. Brine salt is almost synonymous with Szechuan Basin in China. The Basin is the only region in all China to produce this commodity. Normally, the annual output of pure salt in the Basin is about 8,000,000 piculs (one picul equals 133 lbs.), with a total value between 30 to 35 million dollars (Yuan).

The salt-brine belt consists of a tract somewhat rectangular in shape, extending from the northern limit of the Basin adjoining Shensi to the Yangtse River at Lu-hsien on the east and to the Min River at Chien-wei on the west. Generally speaking, this belt lies north of the Yangtse and west of the Chialing River. But scattered brine fields are also found as far as the Feng-chieh districts, almost at the eastern-most edge of the Basin. The most important producing areas of brine-salt are, however, confined to the south central part of the Basin, particularly in the area between the lower Min and To rivers. Among all the producing areas, the Tse-Kung is the most noted (Fig. 20).

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323 The Basin's manufacturing development has been greatly benefited by the presence of numerous agricultural and forestry products, such as silk, cotton, hemp, sugar cane, tung tree, wood pulp, and others. Long before the introduction of modern manufacturing, handicrafts of various kinds, relying principally upon the local raw materials, have been established in the Basin. At present, the most important manufacturing activities include cotton-weaving, silk-weaving, hemp-weaving, paper-making, glass-making, and tung-oil-refining.² The principal manufacturing centers of the Basin are located in the Tzeliuching, Chungking, and Lo-shan areas, where water transportation is most convenient.

¹Sven, op. cit., p. 42.

²W. H. Wong, "The Prospect and Economic Reconstruction of Szechuan," South East China Review, II, No. 3 (1940), 4.

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of its total cotton, and 85 per cent of its silk are produced here in this agricultural area.

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With its combined and greatly varied agricultural and horticultural products, this area compares favorably (in terms of agricultural prosperity) to that of the Chengtu Plain. But, however, unlike the Chengtu Plain, the agricultural land-use of this area is greatly handicapped by its insufficient supply of water for irrigation. This defect is largely due to the prevalence of the high porosity of the bed rocks¹ in this area, where water cannot be accumulated and stored up for irrigation purposes. This condition is especially detrimental to rice culture which requires flooded fields. Consequently, in many districts of this area, the plantation of rice is greatly limited. This factor, in turn, reduces considerably the agricultural prosperity of the area.

In so far as agricultural land-use is concerned, the adjustment to topography, soil conditions, and water supply here is conspicuous. In general, nearly all the alluvial lands along the river banks are used for rice, sugar-cane, cotton, mulberry trees, and other crops. On the saddle areas between hills, if the surface soil and bed rocks are not too loose or porous, paddy fields are always the rule. In the more hilly areas, where water cannot be stored for rice culture, potatoes, rape, wheat, kaoliang, and beans are the dominant crops.

Among all the agricultural areas of the Basin, this area of the lower To-Fou valleys is the most highly commercialized. For instance, in one district, Sai-ning alone, over 65 per cent of its cultivable land is devoted to cotton culture, whereas in Tse Chung district over half of its cultivated land is used for sugar-cane culture. In the actual rural economy, here, more than in any other agricultural area, farmers think more in terms of their "cash crops." This development brings up a very interesting problem in this agricultural area, that is, its insufficiency of food supply. Consequently, considerable amounts of foodstuffs are brought into here from the nearby Chengtu Plain area.

Other outstanding features of this agricultural area include its high population density (Fig. 10) and rich salt deposits.

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¹T. S. Chen, "Geol. Structure of Central Szechuan," Geol. Bi-monthly, IV, No. 6 (1939), 38.

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TABLE 14

PRODUCTION OF SALT IN SZECHUAN (1936)

Name of District	Total Production (In Piculs)	Per Cent of Total Production
Fu-Sun-Yang-Chang.....	3,674,365	81.2
Chien-Wei.....	594,534	9.5
Lo-Shen.....	464,508	6.4
Yun-Yang.....	408,367	5.6
Nen-Pu-Nan-Chung.....	246,130	3.4
Shai-Hung-Peng-Hai.....	218,060	3.0
San-Tai.....	211,124	2.9
Peng-Hai.....	206,262	2.8
Lo-Chi.....	181,369	2.5
Shai-Hung.....	134,690	1.6
Sui-Ming.....	133,039	1.6
Ching-Yen.....	119,349	1.6
Hien-Yang.....	108,815	1.5
Si-Chung.....	64,614	.9
Yen-Ting.....	55,118	.7
Chien-Yang.....	55,051	.7
Peng-Chieh.....	51,313	.7
Tsu-Chung.....	43,036	.6
Kai-Hsien.....	39,775	.6
Peng-Shui.....	32,675	.4
Chung-Chiang.....	27,563	.3
Chung-Hsien.....	8,627	.1
Ta-Cho.....	3,799	.05
Total.....	7,174,572	100.00

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